

The Amazing 10%: Women in Engineering

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Overview

- *Background*
- *Where we are today*
- *What to tell students about engineering*
- *Resources*
- *Local Resources*



Background

- *Product of public schools in Salt Lake City*
 - *Granite and Jordan School Districts*
- *BS, Computer Engineering*
 - *University of Utah*
- *MBA*
 - *David Eccles School of Business, University of Utah*
- *Society of Women Engineer (SWE)*
- *Systems Engineer at L-3 Communications*
CSW

Where we are today

- *The US is not producing enough engineers*
 - *Importing engineers*
 - *Off-shore outsourcing*
- *Roughly 10% of engineers are women*
 - *Compared to 50% of female MDs*
- *Until recently engineering has not been introduced to public school curriculums*
 - *Academy of Math, Engineering, and Science (AMES)*
 - *Math Engineering Science Achievement (MESA)*
 - *Since 1985 in the State of Utah*

What to tell students about engineering

- *Engineering is in EVERYTHING*
- *Engineers are modern-day inventors*
 - *Cell phones*
 - *Cars*
 - *Plastics*
 - *Prosthetic limbs (organic and inorganic)*
 - *Fireworks*
 - *Water in your home*
 - *...*

What to tell your student about engineering (cont)

- *Some of the more popular engineering disciplines include:*
 - *Electrical*
 - *Cell phones, media equipment, intermixed with most other disciplines*
 - *Computer*
 - *Any computers or computer-related hardware*
 - *Mechanical*
 - *Cars, anything with physical needs*
 - *Bioengineering*
 - *Synthetic tendons, organic drug-delivery systems*
 - *Chemical and Fuels*
 - *Batteries, all gasoline*

What to tell your student about engineering (cont)

- *Excellence in math helps but is not the end-all requirement to be an engineer*
- *English, communication skills (both written and oral) are just as important!*
- *Recommended AP Classes:*
 - *Physics*
 - *Calculus BC*
 - *English*
 - *Concurrent enrollment*
 - *Go to college advisor early!*
 - *Check with specific colleges!*

Resources

- *Elementary School Students:*
 - *Future City Competition*
 - <http://www.futurecity.org/>
 - *NASA for Kids*
 - <http://www.nasa.gov/audience/forkids/home/index.html>
 - *NASA SCience File* TM
 - <http://whyfiles.larc.nasa.gov/treehouse.html>
 - *TryScience.org*
 - <http://www.tryscience.org/home.html>

Resources (cont)

- *High School Students*
 - *Women in Science, Technology, Engineering and Mathematics*
 - <http://www.womeninscience.org/>
 - *Discover Engineering*
 - <http://www.discoverengineering.org/>
 - *Engineer Girl*
 - www.engineergirl.org
 - *Engineering K-12 Resource Center*
 - <http://www.engineeringk12.org/precollege/>
 - *A Sightseer's guide to Engineering*
 - <http://www.engineeringsights.org/>

Resources (cont)

- *Teachers and Parents*
 - *ASME's Engineers Solve Problems*
 - <http://www.asme.org/Education/precollege/esp/engsp.htm>
 - *Awesome Library of Lesson Plans*
 - <http://www.awesomelibrary.org/>
 - *Curriculum Reform Institute*
 - <http://www.uwosh.edu/wis/cri.htm>
 - *Educator's Reference Desk*
 - <http://www.eduref.org/>
 - *Introduce a Girl to Engineering Day*
 - <http://www.eweek.org/site/News/Eweek/girlsday.shtml>

Resources (cont)

- *Teachers and Parents*
 - *Math/Science Network's conferences for girls*
 - <http://www.expandingyourhorizons.org/>
 - *Ms. Foundation's Take our Daughter to Work Day*
 - <http://www.daughtersandsonstowork.org/>
 - *National Academy of Engineering's Celebration of Women in Engineering*
 - www.nae.edu

Local Resources

- *Greater Salt Lake Society of Women Engineers*
 - www.gslswe.org
 - gslswe@yahoo.com
 - *Scholarships each year*
 - *Outreach projects*
 - *Resource for science fair judges*
 - *Resource for company tours*
- *Utah Women in Technology*
 - www.utahwit.org
 - *Take a Girl to Work Day*

Local Resources

- *Industry Advisory Council to MESA/STEP*
 - www.ed.utah.edu/mesa/
 - *Industry arm of MESA/STEP*
 - *Resource for company tours*
 - *Resource for scholarships*
 - *Resource for science fair judges*
 - *Resource for funding of special projects*

Conclusion

- *Questions?*
- *Comments?*

